V1-distributed Herpes Zoster and Meningitis in a Two-year Old

[a,b]AUDREY S. WANG, MD; [b,c]TUYET ANN NGUYEN, BS; [a,b]ANDREW C. KRAKOWSKI, MD
[a]University of California, San Diego, La Jolla, California; [b]Rady Children's Hospital, San Diego, California;
[c]Albert Einstein College of Medicine, Bronx, New York

ABSTRACT

Since the advent of the varicella vaccine, occurrence of herpes zoster in children has been rare. However, a subset of patients may develop herpes zoster after receiving the vaccine. Herein the authors report a case of a two-year-old boy who developed herpes zoster in the V1 distribution and meningitis following a single dose of varicella vaccine.

(*J Clin Aesthet Dermatol.* 2015;8(5):53–54.)

A two-year-old boy presented with a three-day history of fever and headache and a one-day history of periorbital edema, erythema, and a progressive vesicular rash on the right face. His pediatrician initially diagnosed bilateral otitis media and prescribed amoxicillin/clavulanic acid for 10 days. The next day, he developed a vesicular, pinkish-red rash with swelling over the right eye and forehead, accompanied by fatigue, decreased oral intake, and intermittent abdominal pain. He was admitted for presumed meningitis and herpes zoster infection. There was no clinical suspicion for immunodeficiency. While there was no known previous exposure to chickenpox, the boy had received a single dose of varicella vaccine at 12 months of age.

Physical exam revealed scattered pinkish-red vesicles and papules on the right forehead, glabella, and superior eyelid. The lesions respected the midline, extending to the nasal bridge and right frontoparietal scalp in a V1 distribution (Figure 1). The right superior eyelid had near-confluent erythema and edema with sharp demarcation at the right lateral canthus; subsequent ophthalmological examination revealed an otherwise normal eye. Right anterior cervical lymphadenopathy was present. Labs revealed an elevated serum white blood cell count with increased polymorphonuclear leukocytes, pleocytosis, and positive varicella polymerase chain reaction (PCR) on cerebrospinal fluid (CSF) analysis; and positive varicella PCR directly from a skin scraping. Herpes simplex virus and enterovirus PCR of CSF were both negative. The patient was treated with intravenous acyclovir (60mg/kg/day) for 10 days with total clearance of his skin lesions and symptoms.

Herpes zoster is a rare diagnosis in children with a reported decreasing incidence since the advent of the varicella vaccine.[1,2] A subset of patients, however, may develop herpes zoster after receiving the vaccine.[3,4] Latency and reactivation of the Oka strain of live attenuated virus used in the vaccine, in addition to subclinical varicella infection, is thought to be the likely cause of herpes zoster in these children.[5]

REFERENCES

1. Tanuseputro P, Zagorski B, Chan KJ, Kwong JC. Population-based incidence of herpes zoster after introduction of a publicly funded varicella vaccination program. *Vaccine*. 2011;29: 8580–8584.
2. Tseng HF, Smith N, Marcy SM, Sy LS, Jacobsen SJ.

DISCLOSURE: The authors report no relevant conflicts of interest.

ADDRESS CORRESPONDENCE TO: Andrew C. Krakowski, MD, Rady Children's Hospital, San Diego, 8010 Frost St., Suite 602, San Diego, CA 92123-4204; E-mail: akrakowski@rchsd.org

Figure 1. Two-year-old boy who presented with periorbital edema, erythema, and a progressive vesicular rash on the right face in a V1 distribution

Incidence of herpes zoster among children vaccinated with varicella vaccine in a prepaid health care plan in the United States, 2002–2008. *Pediatr Infect Dis J.* 2009;28:1069–1072.

3. Ulman CA, Trevino JJ, Gandhi RK. Herpes zoster in a 2-year-old vaccinated against varicella. *Dermatol Online J.* 2014;20:21259.
4. Han JY, Hanson DC, Way SS. Herpes zoster and meningitis due to reactivation of varicella vaccine virus in an immunocompetent child. *Pediatr Infect Dis J.* 2011;30:266–268.
5. Gershon AA, Chen J, Davis L, et al. Latency of varicella zoster virus in dorsal root, cranial, and enteric ganglia in vaccinated children. *Trans Am Clin Climatol Assoc.* 2012;123:17–33; discussion 33–35. ●